

AREAL Visual Inspection Test for Quartz and Glass Fiber Filters

1. Applicability

All quartz and glass fiber filters selected for physical and chemical testing as part of AREAL filter acceptance testing shall be checked for visual defects using this test procedure prior to conducting any other physical or chemical acceptance tests on them.

2. Definitions

a) Reject Filter: A reject filter is considered one not useable for the SLAMS samplers.

b) Defective Filter: A defective filter is considered useable for the SLAMS samplers but contains one or more visual defects.

3. Visual Inspection Procedure:

The filters will be placed individually on a light box or equivalent device and examined for the following imperfections:

a) Imperfections That Will Cause a Filter to be Classified as Rejected:

1. PINHOLE - A small hole that can be identified by examining both the front and the back of the filter.

2. TWO OR MORE DENSE SPOTS OR ONE DENSE SPOT LARGER THAN 0.25 INCHES IN DIAMETER - A dense spot is one which appears as a dark area without sharply defined edges when the filter is viewed from the back and an accumulation of filter fibers is seen when the filter is viewed from the front.

3. TWO OR MORE DARK SPOTS - A dark spot is a spot that resembles a fly speck in appearance.

4. NUMEROUS LOOSE FIBERS/LOOSE FIBERS THAT CANNOT BE BRUSHED OFF - These appear as if a rough object had been drawn across the back of the filter which loosened the filter base. The filters cannot be removed by gently brushing them with a camel hair brush.

5. INDIVIDUAL FIBER ON FILTER SURFACE - This will appear as either a pinhole or as a thin spot on the filter's surface. During sampling this fiber may separate from the filter mat causing a pinhole in the filter.

6. FILTER NOT NUMBERED - A filter that is not identified by a unique number or whose number cannot be read.